

Remarks

Reconsideration and withdrawal of the rejection set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1-3, 5 and 6 remain pending in the application, with Claims 1 and 5 being independent. Claim 4 has been cancelled without prejudice or disclaimer of the subject matter recited therein. Claims 1-3, 5 and 6 have been amended.

Claims 1-6 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,736,995 (Bohorquez et al.). This rejection is respectfully traversed.

As recited in independent Claim 1, the present invention relates to an inkjet recording apparatus for performing recording by ejecting ink onto a recording medium using a plurality of recording heads which apply heat to the ink with heating means to generate bubbles in the ink and to eject the ink with the pressure of the bubbles. The apparatus includes a common plate, recording mode setting means and control means. A plurality of recording element substrates are arranged on the common plate, with each of the plurality of recording element substrates being provided with a plurality of the heating means, and the plurality of recording element substrates being provided for respective recording heads of the plurality of recording heads. The recording mode setting means sets a recording head that is to be used for recording and a recording head that is not to be used for recording, from among the plurality of recording heads. The control means heats the recording head that is set by the recording mode setting means to be not used for recording

to adjust the temperature of the recording head to be used for recording utilizing heat conduction.

As recited in independent Claim 5, the present invention relates to an inkjet recording apparatus for performing recording by ejecting ink onto a recording medium using a plurality of recording heads which apply heat to the ink with heating means to generate bubbles in the ink and to eject the ink with the pressure of the bubbles. The apparatus includes a common plate, discrimination means and control means. A plurality of recording element substrates are arranged on the common plate, with each of the plurality of recording element substrates being provided with a plurality of the heating means, and the plurality of recording element substrates being provided for respective recording heads of the plurality of recording heads. The discrimination means discriminates between a recording head that is to be used and a recording head that is not to be used for the next recording to be performed. The control means heats the recording head discriminated by the discrimination means to be not used before the recording head discriminated to be used for recording starts a recording operation to adjust the temperature of the recording head to be used utilizing heat conduction.

With a typical recording apparatus, since recording preparation is required for the recording heads to be used for recording, it may be difficult to heat them immediately before a printing operation. Although it is possible to carry out such preparation and heating sequentially, such a procedure requires a significant amount of time. With the above arrangement and method, however, even when recording heads to be

used for recording are in the process of preparation, those recording heads can be indirectly heated by heating recording heads not to be used for recording.

Bohorquez et al. relates to an ink jet printer having temperature control of its printheads by utilizing synchronized heating, non-printing pulses as well as printing pulses to the ink firing resistors. The heating pulses are logically ORed with the printing pulses to achieve the synchronization.

However, Bohorquez et al. does not disclose or suggest setting a recording head that is to be used for recording and a recording head that is not to be used for recording, or discriminating between a recording head that is to be used and a recording head that is not to be used for a next recording, as is recited in independent Claims 1 and 5. Thus, Bohorquez et al. does not disclose or suggest heating a recording head that is set to be not used for recording to adjust the temperature of the recording head to be used for recording utilizing heat conduction, as is recited in independent Claim 1, or heating the recording head discriminated to be not used before the recording head discriminated to be used for recording starts a recording operation to adjust the temperature of the recording head to be used utilizing heat conduction, as is recited in independent Claim 5.

Moreover, Figure 3 of Bohorquez et al. depicts a printhead substrate 40 having nozzles 42. This figure does not depict a common plate on which a plurality of recording element substrates are arranged, as is also recited in independent Claims 1 and 5.

Thus, Bohorquez et al. fails to disclose or suggest important features of the present invention recited in independent Claims 1 and 5.

Accordingly, independent Claims 1 and 5 are patentable over the citation of record. Reconsideration and withdrawal of the § 102 rejection are respectfully requested.

For the foregoing reasons, Applicants respectfully submit that the present invention is patentably defined by independent Claims 1 and 5. Dependent Claims 2, 3 and 6 are also allowable, in their own right, for defining features of the present invention in addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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